

In the claims:

1. **(original)** An apparatus for forming a security product comprising a printing press and diffraction grating forming means.
2. **(original)** An apparatus as claimed in claim 1 wherein the printing press comprises any one or more of a
 - a) a feed system;
 - b) means to carry an image to be printed;
 - c) means to apply an ink to;
 - d) means to dry or cure the ink; and
 - e) means to carry a printed security product.
3. **(cancelled)**
4. **(currently amended)** An apparatus as claimed in ~~any one of claims 2 or 3~~ claim 2 wherein the means to carry an image comprises at least one or more cylinders or a plate.
5. **(cancelled)**
6. **(currently amended)** An apparatus as claimed in claim 4 ~~[[5]]~~ wherein each cylinder carries an engraved image.
- 7-8. **(cancelled)**
9. **(currently amended)** An apparatus as claimed in ~~any one of the previous claims~~ claim 1 wherein the printing press comprises in line, an apparatus to transfer the diffraction grating to a substrate.
10. **(currently amended)** A method for forming a security product comprising the steps of:
 - a) providing a sheet of base material, said sheet having an upper and lower surface and being a component of the security product;

b) forming a diffraction grating on at least a portion of the upper surface of the base material;

and

c) depositing a metallic ink on at least a portion of the diffraction grating; or

b) providing a sheet of base material, said sheet having an upper and lower surface;

c) depositing a metallic ink on at least a portion of the diffraction grating; and

d) forming a diffraction grating on at least a portion of the metallic ink.

11. **(original)** A method for forming a holographic diffraction grating on a substrate comprising the steps of:

a) applying a curable compound to at least a portion of the substrate;

b) contacting at least a portion of the curable compound with diffraction grating forming means;

c) curing the curable compound and

d) depositing a metallic ink on at least a portion of the cured compound.

12. **(original)** An in-line method of printing on a substrate using a conventional printing press apparatus together with means for forming a diffraction grating, comprising the steps of:

a) forming a diffraction grating on a discrete portion of the substrate; and

b) depositing a metallic ink on at least a portion of the diffraction grating.

13. **(currently amended)** A method for forming a holographic diffraction grating as claimed in claim 11 on a substrate comprising the steps of:

a) depositing on at least a portion of the substrate a composition comprising a metallic ink admixed with a curable compound;

b) forming a diffraction grating on at least a portion of the composition.

14. **(original)** A method for forming a holographic diffraction grating comprising the steps of:

a) providing a sheet of base material;

b) depositing a release coating to at least a portion of the base material;

c) depositing a curable compound on at least a portion of the coated base material;

d) forming a diffraction grating on at least a portion of the curable compound;

e) depositing a metallic ink on at least a portion of the diffraction grating; and

- f) depositing an adhesive on at least a portion of the metallic ink.

15-18. (cancelled)

19. (currently amended) A method as claimed in ~~any one of claims 10 to 18~~ claim 10 wherein the thickness of the metallic ink when deposited on a substrate is sufficiently thin as to permit the transmission of light therethrough.

20. (original) A method as claimed in claim 19 wherein the percentage of light transmission is at least 30%.

21-22. (cancelled)

23. (original) A method as claimed in claim 19 wherein the optical density of metallic ink when deposited is in the range of light transmission

24. (original) A method as claimed in claim 23 wherein the optical density is in the range of 0.2 to 0.8 as measured by a Macbeth densitometer.

25-34. (cancelled)

35. (currently amended) A method as claimed in ~~any one of claims 16, 17, 27 to 34~~ claim 12 wherein the step of forming of a diffraction grating on a substrate may comprise depositing a curable composition on at least a portion of the substrate.

36. (original) A method as claimed in claim 35 wherein the curable composition is a lacquer.

37. (cancelled)

38. (currently amended) A method as claimed in claim ~~[[35,]]~~ 36 ~~[[or 37]]~~ wherein the curable lacquer is ~~curable~~ cured by means of an ultraviolet (U.V.) light or an electron beam.

39-40. (cancelled)

41. **(currently amended)** A method as claimed in ~~any one of claims 35 to 40~~ claim 35 wherein the diffraction grating is formed on the surface of the curable composition as it is disposed on the substrate.

42-45. **(cancelled)**

46. **(currently amended)** A method as claimed in ~~any one of claims 10 to 45~~ claim 10, wherein the metallic ink comprises metal pigment particles and a binder.

47. **(original)** A method as claimed in claim 46 wherein the pigment particles comprise any one or more selected from the group comprising aluminium, stainless steel, nichrome, gold, silver, platinum and copper.

48. **(original)** A method as claimed in claim 47 wherein the thickness of pigment particles is in the range 100 to 500 angstroms.

49. **(original)** A method as claimed in claim 48 wherein the thickness of pigment particles is in the range of 190 to 210 angstroms.

50-51. **(cancelled)**

52. **(currently amended)** A hologram ~~obtainable~~ obtained using the method of ~~any one of claims 10 to 51~~ claim 10.

53. **(new)** A hologram obtained using the method of claim 11.

54. **(new)** A method as claimed in claim 11, wherein the metallic ink comprises metal pigment particles and a binder.

55. **(new)** A method as claimed in claim 46 wherein the pigment particles comprise any one or more selected from the group comprising aluminium, stainless steel, nichrome, gold, silver, platinum and copper.

56. **(new)** A method as claimed in claim 47 wherein the thickness of pigment particles is in the range 100 to 500 angstroms.

57. **(new)** A method as claimed in claim 48 wherein the thickness of pigment particles is in the range of 190 to 210 angstroms.